

Application No. 09/780,737
Amendment dated August 20, 2004
Reply to Office Action of May 5, 2004

Listing of Claims:

- 1 1. (Currently amended) A method of addressing a bistable cholesteric liquid crystal
2 material having incremental reflectance properties disposed between opposed
3 substrates, wherein one substrate has a first plurality of electrodes deposited
4 thereon facing the other substrate which has a second plurality of electrodes
5 disposed thereon, the intersection of the first and second plurality of electrodes
6 forming a plurality of pixels, the addressing method comprising:
7 applying a predetermined number of pulses to the first plurality of electrodes
8 within a set period of time, each said pulse applied to the first electrodes having a
9 different duration drive period within said set period of time;
10 applying ~~a like number~~ of said predetermined number of pulses to the second
11 plurality of electrodes, which is the same number of pulses as applied to said first
12 plurality of electrodes, within said set period of time, each said pulse applied to
13 the second electrodes also having said different duration drive periods within said
14 set period of time; and
15 selectively associating one of two amplitude values with at least one of said
16 predetermined number of pulses applied to the electrodes to generate a desired
17 incremental reflectance for each of the pixels, wherein said desired incremental
18 reflectance is determined by which one of said amplitude values is associated with
19 which one of said different duration drive periods.
- 1 2. (Cancelled)
- 1 3. (Previously amended) The method according to claim 1, further comprising:
2 preparing said liquid crystal material by applying a preparation pulse to the
3 first and second plurality of electrodes, prior to said applying steps

Application No. 09/780,737
Amendment dated August 20, 2004
Reply to Office Action of May 5, 2004

- 1 4. (Currently amended) The method according to claim 1, wherein each of said
2 different drive duration periods are applied to the first and second plurality of
3 electrodes at the same time.
- 1 5 (Previously amended) The method according to claim 1, wherein the number of
2 said predetermined number of pulses correspond to a different number of said
3 desired incremental reflectances
- 1 6 (Previously amended) The method according to claim 1, wherein a number of said
2 desired incremental reflectances at each pixel is equal to two raised to the number
3 of said predetermined number of pulses less one, or less a constant value.
- 1 7. (Previously amended) The method according to claim 1, wherein said pulses are
2 bipolar
- 1 8. (Previously amended) The method according to claim 1, wherein said pulses are
2 unipolar.
- 1 9. (Previously amended) The method according to claim 1, wherein the number of
2 said predetermined number of pulses is equal to a number of said desired
3 incremental reflectances.
- 1 10. (Previously amended) The method according to claim 9, wherein said number of
2 said desired incremental reflectances corresponds to said number of drive periods,
3 each said drive period having a different length of time than all other said drive
4 periods.
- 1 11. (Previously amended) The method according to claim 1, wherein said number of
2 said predetermined number of pulses is equal to an exponent number applied to
3 two, wherein the exponent number corresponds to a number of pulses, plus one, or
4 plus a constant value.

Application No 09/780,737
Amendment dated August 20, 2004
Reply to Office Action of May 5, 2004

- 1 12. (Currently amended) The method according to claim 11, wherein said exponent
2 number of pulses corresponds to said different duration drive periods, each said
3 different duration drive period having a different length of time, and wherein the
4 additional pulse corresponds to a preparation pulse.
- 1 13. (Original) The method according to claim 12, wherein the shortest drive period is
2 about half the duration of the next longest drive period.
- 1 14. (Original) The method according to claim 12, wherein each drive period is at least
2 either about twice as long in duration as the next shortest drive period or about half
3 as short in duration as the next longest drive period.
- 1 15. (Currently amended) A liquid crystal display, comprising:
2 a pair of opposed substrates having disposed therebetween a cholesteric
3 liquid crystal material, one of said substrates having a first plurality of electrodes
4 disposed thereon facing the other of said substrates which has a second plurality of
5 electrodes, wherein the intersection of said first and second plurality of electrodes
6 form a plurality of pixels; and
7 a drive circuit that applies a predetermined number of pulses to said first
8 plurality of electrodes and ~~a like~~ said predetermined number of pulses to said
9 second plurality of electrodes, which is the same number of pulses as applied to
10 said first plurality of electrodes, within a set period of time, each of said
11 predetermined number of pulses having a different duration drive period within
12 said set period of time, said drive circuit associating one of two amplitude values
13 with at least one of said predetermined number of pulses to generate a desired
14 incremental reflectance for each of the pixels which is determined by which one of
15 said amplitude values is associated with which one of said different duration drive
16 periods.
- 1 16. (Cancelled)

Application No. 09/780,737
Amendment dated August 20, 2004
Reply to Office Action of May 5, 2004

1 17. (Currently amended) The liquid crystal display according to claim 15, wherein
2 said drive circuit applies each of said different duration drive periods to said first
3 and second plurality of electrodes at the same time

1 18. (Previously amended) The liquid crystal display according to claim 15, wherein
2 the number of said predetermined number of pulses correspond to a different
3 number of incremental reflectances

1 19. (Previously amended) The liquid crystal display according to claim 15, wherein
2 the number of said predetermined number of pulses is equal to a number of
3 incremental reflectances.
4